EXHIBIT B

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EXAMINER
CHEN, WENPENG

ART UNIT	PAPER NUMBER
2624	

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12/02/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	**Applicant(s)**
Office Action Summary	12/315,060	SAMUROV ET AL.
	Examiner	**Art Unit**	
	WENPENG CHEN	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5) ☒ Claim(s) *1-28* is/are pending in the application.

    5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☒ Claim(s) *1-2, 5-7, 9-18, 21, 23, 25-27* is/are rejected.

8) ☒ Claim(s) *3,4,8,19,20,22,24 and 28* is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☒ The drawing(s) filed on *21 January 2009* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

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Claim Rejections - 35 USC § 101

1.   Claims 10-16 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter.

Claims 10-16 define a "computer readable medium" with "a computer program". In the

specification, the "computer readable medium" is explicitly defined. Accordingly the Examiner

reads it broadly to include transitory medium such as transmission medium and the computer

program is not embodied on a tangible computer readable medium. While functional descriptive

material may be claimed as a statutory product (i.e., a "manufacture") when embodied on a

tangible computer readable medium, a "signal" per se does not fall within any of the four

statutory classes of 35 U.S.C. §101. A "signal" is considered non-statutory because it is a form

of energy, in the absence of any physical structure or tangible material, that does not fall within

any of the four statutory classes of 35 U.S.C. §101. The rejection can be overcome with changing

"computer readable medium" to "non-transitory computer readable medium". The Examiner will

not consider the change to be adding new matter.

Please see Annex IV, section (c) of the USPTO "Interim Guidelines for Examination of

Patent Applications for Patent Subject Matter Eligibility", Official Gazette notice of 22

November 2005 (currently at

http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm).

Claim Rejections - 35 USC § 112

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2.   Claims 6 and 15 are rejected under 35 U.S.C. 112, first paragraph, because the

specification, while being enabling for "$FV_{subWOI\ 1} = Value_1 * FV_{Mask1} + Value_2 * FV_{Mask2} +$

$Value_3 * FV_{Mask3}$", does not reasonably provide enablement for "$FV_{subWOI\ 1} = Value_1 * FV_{Mask1} +$

$Value_2 * FV_{Mask2} + FV_{Mask3}$". The specification does not enable any person skilled in the art to

which it pertains, or with which it is most nearly connected, to implement the invention

commensurate in scope with these claims.

Claim interpretations

3.   For examining Claims 6 and 15 over the prior art, the Examiner makes the

following interpretation:

-- replace "$FV_{subWOI\ 1} = Value_1 * FV_{Mask1} + Value_2 * FV_{Mask2} + FV_{Mask3}$" with

"$FV_{subWOI\ 1} = Value_1 * FV_{Mask1} + Value_2 * FV_{Mask2} + Value_3 * FV_{Mask3}$".

Claim Rejections - 35 USC § 103

4.   Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Stavely et al (US20060066744) in view of Guroglu et al (US20070212049).

For Claim 1, Stavely teaches a method comprising:

-- generating a plurality of sub-windows of interest arranged in a grid formation in an

autofocus window of interest; (Fig. 3, paragraphs 37, 44; FIG. 3 illustrates that the image capture

region 201 has an autofocus big window, corresponding to a window of interest having an object

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of interest, which includes a plurality of auto focus windows 202 A-I, which are considered as

sub-windows of the big window, arranged in a grid formation.) and

-- executing an autofocus algorithm. (paragraphs 44, 50; The use of multiple autofocus

windows 202 A-I covering different positions within image capture widow 201 is referred to

herein as "a multi-zone autofocus" embodiment. Other embodiments may include algorithms or

manual selection of one of the plurality of autofocus windows 202 A-I to be used as the basis for

determining the focus of the lens 126.)

Stavely teaches further in Paragraphs 44-45 the following.

"Although nine auto focus windows 202 A-I are shown in FIG. 5, other embodiments may include fewer or

additional auto focus windows.

[0045] In FIG. 3, the plurality of autofocus windows 202 A-I are shown adjacent to each other. In other

embodiments, *the autofocus windows 202 A-I may be separated from each other, and/or may overlap each other.*

Furthermore, is some embodiments, the number of the plurality of autofocus windows 202 may be different."

However, Stavely does not teach then feature related to "a plurality of parts at least one

sub-window" and "a focus value mask to each of the plurality of parts" as recited.

Guroglu teaches a method comprising:

-- logically separating into a plurality of parts (windows 71 and 72) at least one window

of interest (active window 70); (paragraphs 78, 92-93, Fig. 7; As shown in FIG. 7, the active

window 70 is composed of a central window 71 serving as a focus target and a plurality of

peripheral windows 72 surrounding the central window 71.)

-- assigning a focus value mask to each of the plurality of parts of the at least one sub-

window; (paragraphs 78, 92-94; The optical detection module 401 sets a plurality of active

windows composed of a central window and plural peripheral windows surrounding the central

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window, allocates different weights to the central window and the peripheral windows,

respectively, and integrates the predetermined image components so as to calculate an auto-focus

value. The WAF_i form the focus value mask.) and

      -- executing an autofocus algorithm using the assigned focus value masks. (Fig. 6,

paragraphs 89, 91, 96; The auto-focus value AF_{cur} is calculated based on WAF_i. AF_{cur} is used for

executing an autofocus algorithm shown in Fig. 5.)

      It is desirable to improve autofocusing such as those shown in paragraph 95 of Guroglu

(for example adjusting focus related to a background sight. It would have been obvious to one of

ordinary skill in the art, at the time of the invention, to apply Guroglu's teaching to divide each of

Stavely's windows 202 A-I into central window and peripheral windows for calculating focus

value for said each of Stavely's windows 202 A-I for further executing an autofocus algorithm,

because the combination improves autofocusing. The combination thus teaches:

      1. A method comprising:

      -- logically separating into a plurality of parts at least one sub-window of interest of a

plurality of sub-windows of interest arranged in a grid formation in an autofocus window of

interest;

      -- assigning a focus value mask to each of the plurality of parts of the at least one sub-

window; and

      -- executing an autofocus algorithm using the assigned focus value masks.

      The combination further teaches the followings.

      2. The method according to claim 1, wherein each of the at least one sub-window of

interest along at least one row or column of the grid formation partially overlaps an adjacent one

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of the plurality of sub-window of interest in the grid formation, and where a distance between a

center of the at least one sub-window of interest and the adjacent sub-window of interest in the

grid remains unchanged. (Stavely: paragraph 45; The autofocus windows 202 A-I shown in Fig.

3 may overlap each other. Because the grid formation of Fig. 3 is not changed, the overlapping

keeps a distance between a center of the at least one sub-window of interest and the adjacent sub-

window of interest in the grid unchanged.)

 5. The method according to claim 2, further comprising computing a focus value of an

object of interest based on at least one corresponding focus value mask; and determining an

autofocus setting for the object of interest based on at least the computed focus value. (Guroglu:

Fig. 6, paragraphs 89, 91, 96; The auto-focus value AF_{cur} is calculated based on WAF_i. AF_{cur} is

used for executing an autofocus algorithm shown in Fig. 5.)

 7. The method according to claim 1, where a focus value mask of a logically separated

part of a sub-window that is closer to a center of the sub-window is assigned a higher weighted

focus value than a focus value mask of a logically separated part of the sub-window that is

farther from the center of the sub-window. (Guroglu: paragraphs 78, 92-94; The optical detection

module 401 sets a plurality of active windows composed of a central window and plural

peripheral windows surrounding the central window, allocates different weights to the central

window and the peripheral windows, respectively. It is more preferable that weights are allocated

to the regions corresponding to the plurality of central windows 71 and a weight is allocated to at

least one of the plurality of peripheral regions 72. It is obvious that weights are preferable

allocated to central windows 71 and some of peripheral regions 72 may not have any weight.)

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9. The method according to claim 1, performed in a user equipment. (Both Stavely: Fig.
1 and Guroglu: paragraph 003; a camera)

Claims 10, 11, 14, and 16 are the medium claims corresponding to Claims 1, 2, 5, and 7,
respectively. Because Stavely teaches a memory for storing a computer program for
implementing processing (paragraphs 26, 29, claim 32), the combination of Stavely and Guroglu
also teaches Claims 10, 11, 14, and 16.

For Claim 17, Stavely teaches an apparatus (Fig. 1) comprising:

-- a processor (processor system of Fig. 1) configured to generate a plurality of sub-
windows of interest arranged in a grid formation of an autofocus window of interest; (Fig. 3,
paragraphs 37, 44; FIG. 3 illustrates that the image capture region 201 has an autofocus big
window, corresponding to a window of interest having an object of interest, which includes a
plurality of auto focus windows 202 A-I, which are considered as sub-windows of the big
window, arranged in a grid formation.) and

-- the processor further configured to execute an autofocus algorithm. (paragraphs 44, 50;
The use of multiple autofocus windows 202 A-I covering different positions within image
capture widow 201 is referred to herein as "a multi-zone autofocus" embodiment. Other
embodiments may include algorithms or manual selection of one of the plurality of autofocus
windows 202 A-I to be used as the basis for determining the focus of the lens 126.)

Stavely teaches further in Paragraphs 44-45 the following.

"Although nine auto focus windows 202 A-I are shown in FIG. 5, other embodiments may include fewer or
additional auto focus windows.

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[0045] In FIG. 3, the plurality of autofocus windows 202 A-I are shown adjacent to each other. In other embodiments, *the autofocus windows 202 A-I may be separated from each other, and/or may overlap each other.* Furthermore, is some embodiments, the number of the plurality of autofocus windows 202 may be different."

However, Stavely does not teach then feature related to "a plurality of parts at least one sub-window" and "a focus value mask to each of the plurality of parts" as recited.

Guroglu teaches an apparatus comprising a processor (paragraph 77) to perform the following steps:

-- logically separating into a plurality of parts (windows 71 and 72) at least one window of interest (active window 70); (paragraphs 78, 92-93, Fig. 7; As shown in FIG. 7, the active window 70 is composed of a central window 71 serving as a focus target and a plurality of peripheral windows 72 surrounding the central window 71.)

-- assigning a focus value mask to each of the plurality of parts of the at least one sub-window; (paragraphs 78, 92-94; The optical detection module 401 sets a plurality of active windows composed of a central window and plural peripheral windows surrounding the central window, allocates different weights to the central window and the peripheral windows, respectively, and integrates the predetermined image components so as to calculate an auto-focus value. The WAF_i form the focus value mask.) and

-- executing an autofocus algorithm using the assigned focus value masks. (Fig. 6, paragraphs 89, 91, 96; The auto-focus value AF_{cur} is calculated based on WAF_i. AF_{cur} is used for executing an autofocus algorithm shown in Fig. 5.)

It is desirable to improve autofocusing such as those shown in paragraph 95 of Guroglu (for example adjusting focus related to a background sight. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply Guroglu's teaching to divide each of

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Stavely's windows 202 A-I into central window and peripheral windows for calculating focus

value for said each of Stavely's windows 202 A-I for further executing an autofocus algorithm,

because the combination improves autofocusing. The combination thus teaches:

17. An apparatus comprising:

-- a processor configured to logically separating into a plurality of parts at least one sub-

window of interest of a plurality of sub-windows of interest arranged in a grid formation of an

autofocus window of interest;

-- the processor configured to assign a focus value mask to each of the plurality of parts

of the at least one sub-window; and

-- the processor further configured to execute an autofocus algorithm using the assigned

focus value mask.

The combination further teaches the followings.

18. The apparatus according to claim 17, wherein each of the at least one sub-window of

interest along at least one row or column of the grid formation partially overlaps with an adjacent

one of the plurality of sub-window of interest in the grid formation, and where a distance

between a center of the at least one sub-window of interest and the adjacent sub-window of

interest in the grid remains unchanged. (Stavely: paragraph 45; The autofocus windows 202 A-I

shown in Fig. 3 may overlap each other. Because the grid formation of Fig. 3 is not changed, the

overlapping keeps a distance between a center of the at least one sub-window of interest and the

adjacent sub-window of interest in the grid unchanged.)

21. The apparatus according to claim 18, further comprising an executable computer

program and a processor configured to compute a focus value of an object of interest based on at

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least one corresponding focus value mask; and the processor and a display interface configured

to determine an autofocus setting for the object of interest based on at least the computed focus

value. (Guroglu: Fig. 6, paragraphs 89, 91, 96; The auto-focus value AF_{cur} is calculated based on

WAF_i. AF_{cur} is used for executing an autofocus algorithm shown in Fig. 5. Stavely: paragraph

28-29, display 107 and GUI 109)

 23. The apparatus according to claim 17, where a focus value mask of a logically

separated part of a sub-window that is closer to a center of the sub-window is assigned a higher

weighted focus value than a focus value mask of a logically separated part of the sub-window

that is farther from the center of the sub-window. (Guroglu: paragraphs 78, 92-94; The optical

detection module 401 sets a plurality of active windows composed of a central window and

plural peripheral windows surrounding the central window, allocates different weights to the

central window and the peripheral windows, respectively. It is more preferable that weights are

allocated to the regions corresponding to the plurality of central windows 71 and a weight is

allocated to at least one of the plurality of peripheral regions 72. It is obvious that weights are

preferable allocated to central windows 71 and some of peripheral regions 72 may not have any

weight.)

 25. The apparatus according to claim 17, embodied in a user equipment. (Both Stavely:

Fig. 1 and Guroglu: paragraph 003; a camera)

 Claims 26 and 27 recite features similar to those recited in Claims 17 and 18,

respectively. Accordingly, the combination of Stavely and Guroglu also teaches Claims 26-27.

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Examiner's Statement of Reasons for Allowance

5.   Claim 22 and the interpreted Claims 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance. The prior art fails to teach Claim 22 and the interpreted Claims 6 which specifically comprise the following features in combination with other recited limitations:

-- where computing the autofocus value (FV) uses calculations comprising: $FV_{subWOI\ 1} = Value_1 * FV_{Mask1} + Value_2 * FV_{Mask2} + Value_3 * FV_{Mask3}$, where $Value_x$ represents a rational value assigned to a corresponding focus value mask.

6.   Claims 3-4, 19-20, and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance. The prior art fails to teach Claims 3, 19, and 28 which specifically comprise the following features in combination with other recited limitations:

-- where an additional at least one sub-window of interest is placed in at least one row of sub-windows of interest in the grid formation such that a number of sub-windows of interest in the at least one row is greater than in another row of the grid formation, and where a width of a

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sub-window of interest in the at least one row of sub-windows remains unchanged, and the sub-window of interest in the at least one row overlaps with at least one adjacent sub-window such that a distance between a center of the sub-window of interest and the adjacent sub-window of interest in the grid formation decreases.

7.   Claims 8 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance. The prior art fails to teach Claims 8 and 24 which specifically comprise the following features in combination with other recited limitations:

-- where the plurality of parts of the at least one sub-window of interest comprise a first part closest to the center of the sub-window of interest, a third part farthest from the center of the sub-window of interest, and a second part in between the first part and the second part, where the first part has a weighted focus value of $Value_1$, the second part has a weighted focus value of $Value_2$, and the third part has a weighted focus value of $Value_3$, where $Value_x$ is a rational value.

Examiner's Comment

8.   Claims 12, 13, and the interpreted Claim 15 are not rejectable over the prior art.

The reason is the same as given for Claims 3, 4, and 22, respectively

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Conclusion

9.   The prior art made of record in form PTO-892 and not relied upon is

considered pertinent to applicant's disclosure.

10.   Any inquiry concerning this communication or earlier communications

from the examiner should be directed to Wenpeng Chen whose telephone number is 571-

272-7431. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone numbers for the

organization where this application or proceeding is assigned are 571-273-8300 for regular

communications and 571-273-8300 for After Final communications. TC 2600's customer service

number is 571-272-2600.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 571-272-2600.

/Wenpeng Chen/
Primary Examiner, Art Unit 2624

December 1, 2011